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ABSTRACT

A number of college students in forensic debate may be deterred from debating broad topics due to a lack of appropriate cognitive development and a perception of unacceptable certainty. These students have failed to develop formal thinking patterns because they lack reinforcing experiences in reasoning at that level. A sequenced pattern of instruction, one that moves students through increasingly broader topics, will help overcome these barriers. Progressively broader and more complex topics can provide the challenging, but solvable, stimuli required for the transition between cognitive structures. Likewise, the experience in confronting increasingly more uncertain debate situations can serve to improve an individual's tolerance for ambiguity. Debating limited case studies has been found to increase students' tolerance for disagreement. Recently, the National Developmental Conference on Forensics recommended that novice divisions of tournaments provide narrower versions of the national topic or restrict the affirmative case areas. The student who experiences these situations should be better able to debate broad topics. (HOD)

BROAD TOPICS AS DEBATE ENTRY BARRIERS: THE EFFECTS OF COGNITIVE DEVELOPMENT AND TOLERANCE FOR AMBIGUITY

by

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There have been a variety of claims regarding the positive consequences of training in argumentation. The benefits of forensic debate activity, however, are limited to the few who participate, not the many who choose to avoid this form of education. Changing this balance is an important goal. As Samuel Becker (1975) suggested at the first National Developmental Conference on Forensics:

> The challenge for all in forensic communication is finding more effective ways to reach those who need reaching - to help them to know and to be stimulated not simply more than they have been in the past, but up to the level where they have the means to participate in problem-solving or conflict-resolving discourse (p. 61).

A first step in this direction should involve isolating the forces that cause students to avoid competitive interscholastic debate.

This paper explores the effect that broad debate topics have on the decisions of students to engage in forensic debate. It is suggested that debating broad topics may require mental structures that have yet to develop in many college students. It is also posited that the greater uncertainty associated with broad topics may lead to anxiety in a large number of students.

Cognitive Development

The Swiss psychologist Jean Piaget has been a major contributor to advances in the theory of cognitive development. According to Piaget, there are four stages in the development of cognitive ability. In order of their appearance, the four stages are: the sensorimotor stage, the preoperational

stage, the concrete-operational stage, and the formal-operational stage. It is the individual's stage of cognitive growth, more than any other factor, that influences learning and retention (Haley and Good, 1976).

The two stages of interest in this paper are the concrete-operational and formal-operational. Paiget viewed the stage of concrete operations as occurring between ages seven and eleven. During this stage the individual's thought processes become rigorous and logical. When presented with existing objects or events, the concrete thinker can "organize and stabilize" the world (Flavel, 1963). Research has identified several limitations on the cognitive processes of the concrete thinker. Even individuals in the later part of this stage cannot isolate "well-mixed variables" (Inhelder and Piaget, 1958). Concrete thinkers have trouble developing hypotheses or proofs, designing experiments or holding all things constant except for one variable being tested (Haley and Good, 1976).

The formal operational stage begins about age eleven in Piaget's theory. During the following years the cognitive processes become fully abstract. Observed information is no longer required for decision-making. The formal thinker conceives of hypothetical situations or imagines circumstances that have never occurred (Brainerd, 1978). In this stage the individual develops the ability to "attack a problem by first visualizing all the possible solutions and then systematically testing, via experimentation and logical analysis, to find out which solutions are workable" (Haley and Good, 1976).

Some of the early work of Ausbel (1964) supported the stages outlined by Piaget, but contended that the age brackets were subject to substantial variation among individuals. Wile Piaget claimed that individuals would begin the early formal-operational stage during their early teens, Walker, Hendrix and Mertens (1980) concluded that the majority of college freshmen

do not even exhibit formal thinking patterns. Lawson and others (1974) found only 11% of their sample of college freshmen and sophomores displaying formal thinking processes. McKinnon's (1971) investigation of 143 college freshmen found 22% in the formal-operational stage of development.

If only a minority of college students are capable of operating in the formal thought stage, then the consideration of causes and solutions to complex social, political and economic problems will elude the vast majority of potential debaters. In fact, facing problems that are exceptionally complex and technical will only frustrate a student's chances of progressing from the concrete to the formal stage. The ideal learning situation, according to Lawson and Wollman (1975) is one where the student views the problem as challenging, but solvable. As long as the state of disequilibrium produced in the student is mild, alterations in the reasoning pattern will occur as the student assimilates the new information.

Tolerance for Ambiguity

There is evidence of significant variations among individuals' tolerance for ambiguous situations (Budner, 1962). For those with a relatively low tolerance for ambiguity, confronting debate topics that are broad is likely to produce an unacceptable level of uncertainty.

Literature on the construct "tolerance for ambiguity" provides some insight into the reactions of potential debaters. Norton (1975) suggested that intolerance stems from the perception of a stimulus "as a source of psychological discomfort or threat" (p. 609). As Budner's (1962) work discovered, for many individuals uncertain situations are percived as a source of threat. Burgoon (1971) characterized intolerance for ambiguity as

individual "rigidity in dealing with tasks where the correctness of alternatives is not clear" (p. 121). Some potential debaters facing a highly unpredictable argumentative situation are likely to experience substantial anxiety.

For individuals with low tolerance, confronting even two differing versions of the truth, an affirmative and a negative, may be inordinately threatening. Low tolerants may be incapable of debating even the most narrow of topics. As Burgoon (1971) notes, intolerants will attempt to avoid the threatening situation. In this instance, they will choose not to debate.

Individuals with moderate degrees of tolerance may debate. However, the topics they encounter will determine whether they, too, flee the activity. If the topic is sufficiently broad so that the debater has only minimal certainty regarding the issues that will be argued, then the threat will bar the student from continuing the activity. This result is, of course, dependent on individual perceptions. If the debater views a broad topic as being narrow, then participation will continue until the perceptions match reality.

Are Narrow Topics Narrow?

Though debating narrow topics may be more attractive to a large majority of college students, framing these topics may be easier said than done. It seems worthwhile to investigate whether there are substantive differences between broad and narrow debate topics. Some of the distinctions between these categories of debate topics may be illusory.

An analogy to mathematics illustrates how apparent size does not always

reflect substance. Though the distance from the one inch mark on a ruler to the two inch mark is shorter (narrower) than the length from the two inch mark to the six inch mark, both segments contain an equal number of points. The principle of cardinality maintains that each point in one length can be produced by a formula from each and only one point in the longer length. In this case the equation

$$f(x) = 4x-2$$

converts every point in the shorter length into a point in the longer segment. A separate formula reverses the process. If this analogy is appropriate, it could be claimed that reducing the breadth of a topic does not decrease the number of issues that the topic subsumes.

Support for this notion can be found in other quarters. Where causality is relevant, limiting the focus of the topic need not restrict the debatable issues. Whether the subject of the topic is a member of a large, but closed, system or an open system, there are innumerable causes and effects that can be associated with the subject.

The conception that the causes of a problem must be apparently related to or resemble the problem has long been rejected. John Stuart Mill (1974) observed, "The most deeply-rooted fallacy ... is that the conditions of a phenomenon must, or at least probably will, resemble the phenomenon itself" (p. 765). The application of this resemblence criterion led many to ridicule Walter Reed's suggestion that the causes of yellow fever might be the Aedes aegypti mosquito.

In debates where the issues appear to be quite narrow, there may still be substantial debate on separate grounds. The credibility of evidence is

always subject to argument, and may dominate all other issues. A murder trial may revolve around the reliability of eyewitness testimony or the scientific validity of investigative procedures, rather than questions of motive, or ability to commit the crime. As a member of the House Judiciary Committee observed during the Nixon impeachment hearings, even the claim that a particular creature is an elephant may be countered with the objection that the beast is simply "a mouse with a glandular condition."

Summary

Though there is some question whether it is possible to accurately identify or construct narrow debate topics, there would be merit in having them available for beginning debaters. A substantial number of college students may be deterred from debating broad topics due to a lack of appropriate cognitive structure and a perception of unacceptable uncertainty.

A sequenced pattern of instruction, one that moves students through increasingly broader topics, will help overcome both barriers. Walker, Hendrix and Mertens (1980) suggest that students fail to develop formal thinking patterns because they lack reinforcing experiences in reasoning at that level. Progressively broader and more complex topics may provide the challenging, but solvable, stimuli required for the transition between cognitive structures.

Likewise, the experience in confronting increasingly more uncertain debate situations can serve to improve an individual's tolerance for ambiguity. Debating limited case studies has been found to increase students' tolerance for disagreement (Brownlee, 1933). Crandall (1969)

found a strong .50 correlation between his own measure of tolerance for disagreement and Budner's (1962) scale of tolerance for ambiguity.

This paper does not argue against the use of broad topics in interscholastic debate. Nevertheless, it is apparent that a large number of college students will choose to avoid the activity if they must confront broad topics. The best introduction to debate might be classroom experiences arguing single issues. The recently concluded second National Developmental Conference on Forensics has recommended that novice divisions of tournaments provide narrower versions of the national topic or restrict the affirmative case areas. The student who experiences these situations should be better able to debate broad topics. By this means forensics competition will be more effective at reaching "those who need reaching" (Becker, 1975).

References

Ausbel, D.P. The transition from concrete to abstract cognitive functioning: Theoretical issues and implications for education. Journal of Research in Science Teaching, 1964, 2, 261-266.

Becker, S.L. Research needs in forensic communication. In J.H. McBath (Ed.), Forensics as communication. Skokie: National Textbook, 1975.

Brainerd, C.J. Piaget's theory of intelligence. Englewood Cliffs: Prentice Hall, 1978.

Brownlee, D.R. Training in argumentation and tolerance for disagreement. Paper presented at the Southern Speech Communication Association Convention, April 1983.

Burgoon, M. Amount of conflicting information in a group discussion and tolerance for ambiguity as predictors of task attractiveness. Speech Monographs, 1971, 38, 29-50.

Crandall, J. Self perceptions and intolerance attraction as related to tolerance-intolerance of ambiguity. Journal of Personality , 1959, 37, 127-139.

Flavel, J.H. The developmental psychology of Jean Piaget. New York: Van Nostrand, 1963.

Haley, S.B., and Good, R.G. Concrete and formal operational thought: Implications for introductory college biology. American Biology Teacher, 1976, 38, 407-412.

Inhelder, B., and Piaget, J. The growth of logical thinking from childhood to adolescence. New York: Basic Books, 1958.

Lawson, A.E., and Wollman, W.T. Physics problems and the process of self-regulation. The Physics Teacher, 1975, 13, 470-479.

Mill, J.S. A system of logic ratiocinative and inductive. Toronto: University of Toronto Press, 1974.

Norton, R. Measurement of ambiguity tolerance. Journal of Personality Assessment, 1975, 39, 607-619.

Walker, R.A., Hendrix, J.R., and Mertens, T.R. Sequenced instruction in genetics and Piagetian cognitive development. American Biology Teacher, 1980, 42, 104-108.